ABSTRACT

An evaporable foam pattern assembly for use in a process of casting a one-piece article in a mold filled with flowable particulate molding material. A first foam pattern section includes a first recess pattern portion and an adhesive surface pattern adapted to be joined to an adhesive surface pattern of a second foam pattern section having a second recess pattern portion that is registered with the first recess pattern portion to define the article when the adhesive surface patterns of the first and second foam pattern sections are adheringly joined. The registered first and second recess pattern portions define an outer shaped surface pattern of the article, and an inner shaped surface pattern of the article. An inlet end section of a tubular passageway cavity pattern forms a fluid flow path from the inner shaped surface pattern through an outlet end section of the tubular passageway cavity pattern that extends openly and outwardly through the outer shaped surface pattern. A structural configuration at the inlet end section is effective to enhance movement of particulate molding material into the passageway cavity pattern during the casting process to form a passageway fluid connection section within the article. Molten material poured into the mold evaporates and replaces the evaporable pattern assembly to produce the article. The invention more specifically produces a novel one-piece brake caliper casting having a cast-in tubular passageway having an inner surface diameter of less than about 6.0 mm. The unique casting design minimizes the time required to machine and assembly the finished disc brake caliper of the invention.